

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figures 1, 3, 8 and 14. Attached hereto are 4 replacement sheets. The changes are as follows:

In Figures 1A and 1B, a ribbon is now depicted attached to the “Internal Spring Trigger (8)”.

Figure 3 has been amended to replace the reference characters “1” - “4” with “I” - “IV”.

Figure 8, the solid black line that was used to depict gas/fluid has been removed.

Figure 14, the drawing now depicts the collapsible box attached through the use of a hook such as the hook 11 shown in Figure 1A or 1B.

Attachments: Replacement Sheets (4)

REMARKS

The specification is amended to remove reference to an "Internal Spring Activation Element" for the purpose of clarity. Further, a sentence was added to the specification to explain the operation and alternate purpose of the Hanger (12) when not being used to move the Internal Spring Pin (2).

Claims 1-11 constitute the pending claims in the present application. Claim 3 and 4 were withdrawn from consideration. Claims 1, 2, 6, 7, 9 and 11 have been amended.

The issues raised by the Examiner in the Office Action are addressed below in the order they appear in the prior Action.

The Drawings Comply with 37 CFR 1.83 and 1.84

The Examiner objects to the improper use of a solid black line to represent the cross hatching for gas or fluid in Figure 8. Applicant has amended Figure 8 to remove the solid black line that was used to depict gas/fluid. Further, the Examiner objects to the designation of the directions of movement with reference characters "1" - "4" in Figure 3 since characters "1" - "4" have already been used in Figures 1A and 1B to designate the elements of the mechanism. Applicant has amended Figure 3 to replace the reference characters "1" - "4" with "I" - "IV".

The Examiner objects to the drawings as failing to comply with 37 CFR 1.83(a) because the string attached to the trigger (claim 9, line 4-5) must be shown or the feature canceled from the claim. Applicant has amended Figures 1A and 1B, a ribbon is now depicted attached to the "Internal Spring Trigger (8)".

Specification

The amendment filed May 2, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. The added material which is objected to is in Figure 14 which depicts the collapsing box as being attached to the main structure via

pivot joints. Applicant has amended Figure 14 to now depict a collapsible box attached through the use of a hook such as the hook (11) shown in Figure 1A or 1B

The Claims Comply with 35 U.S.C. §112

Rejection of Claim 4 under 35 U.S.C. §112, first paragraph

Claim 4 is rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Applicant withdraws Claim 4.

Rejection of Claim 6 under 35 U.S.C. §112, second paragraph

Claim 1, 2, and 4-11 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Regarding claim 1, the Examiner contends that it is unclear how an internal spring activation element becomes more than one element. Further, the Examiner is unclear how release pin 7 interacts with the geometry of the trap 9 as recited in lines 9-10. Applicant has amended claim 1 to remove the reference to an internal spring activation element. Further, the Applicant has removed the inclusion of the release pin as interacting with the geometry of the trap.

Regarding claim 6, the Examiner contends that it is unclear how the hanger 12 is able to push the internal spring pin 2 down by itself as described in line 4. Further, the Examiner is unclear how release pin 7 interacts with the geometry of the trap as recited in lines 10-11. Applicant has amended claim 6 to reference a movable hanger through which force can be applied to move the position of the internal spring pin. Further, the Applicant has removed the inclusion of the release pin as interacting with the geometry of the trap.

Regarding claims 7, 9 and 11, the Examiner contends that it is unclear how an internal spring activation element becomes more than one element. Further, the Examiner is unclear how release pin 7 interacts with the geometry of the trap 9. Applicant has amended claim 7, 9 and 11 to remove the reference to an internal spring activation

element. Further, the Applicant has removed the inclusion of the release pin as interacting with the geometry of the trap.

Regarding claims 1, 6, 7, 9, and 11, the Examiner contends the use of the term “one or more ball bearings or slugs” in claim 1, 7, 9, and 11, line 6, and claim 6, line 7, makes unclear how the release pin can be between just one ball bearing or one slug when first condition or the or-statement is recited in the alternative. Applicant has amended claims 1, 6, 7, 9, and 11 to state that the release pin is configured to be moveable to effect the position of one or more ball bearings or slugs in an internal geometry of the trap.

Regarding claim 2, 4, 5, and 8, the Examiner contends the claims depend from claim 1 and therefore are indefinite. Applicant has amended claim 1.

Double Patenting

The examiner advised that should claim 5 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. Applicant has amended claim 6 to reference “a movable hanger” which is different from “a hanger” as referenced in claim 5 which is affixed to the main structure (reference Figure 5 - Hanger 12).

Accordingly, reconsideration and withdrawal of the §112 rejection is respectfully requested.

The Claims Comply with 35 U.S.C. §102

Rejection of Claims under 35 U.S.C. §102(b) (De Pew U.S. Patent No. 3,065,011)

Claims 1, 2, 5-8, 10, and 11 are rejected under 35 U.S.C. §102(b) as being anticipated by De Pew (U.S. Patent No. 3,065,011). Applicant traverses this rejection to the extent it is maintained over the claims as amended.

Claim 1 (and by dependency claims 2, 5, 8 and 10) recites a low-force release mechanism comprising: a main structure; a trap; a *moveable* internal spring pin with an

internal spring, to eliminate ordinal locking of the trap; a release pin; at least one trigger; and attachments by which a container is attached to said main structure and said trap, wherein the release pin is configured to be moveable *to effect the position of* one or more ball bearings or slugs in an *internal* geometry of the trap, such that the position of said trap is locked and held; a load force is *distributed away from the release pin*; a trigger to permit application of a low force to move a release pin; and one or more ball bearings or slugs interact with the *internal* geometry of the trap, wherein the one or more ball bearings or slugs retract upon removal of the release pin such that the application of the low force on the trigger causes the internal spring pin and the release pin to move a position of the container. Claim 6 further recites a movable hanger, claim 7 recites a lift spring, and claim 11 further recites a trap spring.

De Pew discloses a device with two sets of ball bearings 21 and 36 (Figure 1). In neither instance, however, is the release pin 20 moveable between the ball bearings such that ball bearings interact with the internal geometry of the trap 11 such that the position of said trap is locked and held, as recited in the pending claims. Contrary to the ball bearings or slugs recited in the pending claims, the ball bearings 36 *retract* in the locking position (see e.g., column 2, lines 46-50). And unlike the ball bearings recited in the pending claims, the ball bearings 21 do not interact with the *internal* geometry of the trap 11 to lock and hold a position of the trap. The ball bearings 21 actually protrude (“...an outer extended position...” see e.g., column 2, line 15) from the trap 11 and still do not lock and hold the trap 11 but instead provide points of attachment for bracket 16. Furthermore, what the Examiner characterizes as an internal spring pin 41 is actually two rivets, which fix a ring 40 to the body member 10 (see e.g., column 2, lines 50-54). The fixed ring 40 holds spring 39 in compression against the trigger 38. Neither the rivets 41 nor the ring 40 are moveable and are unable to move a position of the container A8 in conjunction with the internal spring 46 and release pin 20, which is in contrast to the internal spring pin recited in the pending claims. Furthermore, the Examiner contends a load force is distributed away from the trigger 38. De Pew’s device can not release when a load applied by bracket 16 is greater than the force exerted by the internal spring 46, thus the load is not distributed away from the trigger 38 because no positive load (a load

force greater than the force exerted by the internal spring 46) can be present during release of the De Pew device.

Regarding claim 2, see the preceding remarks for claim 1.

Additionally, regarding claim 5, Applicants point out that what the Examiner characterizes as a hanger 13 is a delineated flange (see e.g., column 2, lines 2-4) of the body member 10.

Regarding claim 6, Applicants point out that what the Examiner characterizes as a hanger 13 is a delineated flange (see e.g., column 2, lines 2-4) of the body member 10. Thus, contrary to the Examiner's assertions, even if the flange 13 were considered a hanger it is not movable and therefore can not move the position of the internal spring pin, as recited in the pending claim.

Regarding claim 7, Applicants point out that what the Examiner characterizes as a lift spring 30 is compressed when De Pew's device is triggered. This is contrary to the lift spring recited in the pending claims, which expands upon the triggering of the device.

Regarding claim 11, Applicants point out that what the Examiner characterizes as a trap spring 39 does not interact with what the examiner characterizes as the trap 20. Furthermore, the trap spring is compressed when De Pew's device is triggered. This is contrary to the trap spring recited in the pending claims, which expands upon the triggering of the device.

Regarding claim 10, Applicant contends that there is no load force distribution in De Pew's device just load force transfer, when a load force is present. In De Pew's device a load force applied by bracket 16 would be transferred to the trap 11, then to the washer 48 and, finally, to the main body 10. Applicants point out that what the Examiner characterizes as the main structure 12 never has any load force applied to it or transferred

through it and therefore there is no load force distribution to the main structure, as recited in the pending claim.

Accordingly, De Pew does not teach or suggest all the elements of the pending claims. For the foregoing reasons, Applicant believes that the reference cited by the Examiner does not anticipate the pending claims. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

The Claims Comply with 35 U.S.C. §103

Rejection of Claims under 35 U.S.C. §103 (De Pew U.S. Patent No. 3,065,011)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatenable over De Pew, 3,065,011.

Applicant withdraws claim 4.

Rejection of Claims under 35 U.S.C. §103(a) (De Pew, U.S. Patent No. 3,065,011 in view of Linder

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatenable over De Pew, 3,065,011, in view of Linder. Applicant traverses this rejection to the extent it is maintained over the claims as amended.

The Examiner's attention is drawn to MPEP § 706.02(j), which sets forth that a teaching or suggestion provided by the prior art reference (or references when combined) of all the claimed limitations is necessary to establish a *prima facie* case of obviousness. The following comments address this requirement of a rejection under 35 U.S.C. § 103(a).

De Pew is discussed above. Linder discloses only a box. Linder does not describe the use of a bag, a collapsible box, or a net as recited in claim 8.

Linder does not overcome the deficiencies of De Pew discussed above. Accordingly, neither De Pew nor Linder, either alone or in combination, teach or suggest all the elements of the pending claims.

For the foregoing reasons, Applicant believes that the references cited by the Examiner do not render the claimed subject matter *prima facie* obvious under 35 U.S.C § 103(a). Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Rejection of Claims under 35 U.S.C. §103(a) (De Pew, U.S. Patent No. 3,065,011 in view of Huff, U.S. Patent No. 1,027,481)

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over De Pew (U.S. Patent No. 3,065,011) in view of Huff (U.S. Patent No. 1,027,481). Applicant traverses this rejection to the extent it is maintained over the claims as amended.

De Pew is discussed above. Huff discloses the attachment of a cable from a part of the releasing means of a hook (column 2, lines 83-89). Huff does not teach or suggest the attachment of a string to a low-force release mechanism as recited in claim 9.

Huff does not overcome the deficiencies of De Pew discussed above. Accordingly, neither De Pew nor Huff, either alone or in combination, teach or suggest all the elements of the pending claims.

For the foregoing reasons, Applicant believes that the references cited by the Examiner do not render the claimed subject matter *prima facie* obvious under 35 U.S.C § 103(a). Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION


In view of the foregoing amendments and remarks, I respectfully requests reconsideration and withdrawal of the pending rejections. I believe that the pending claims are in condition for allowance and favorable reconsideration is respectfully solicited.

Respectfully submitted,

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